



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,616	04/05/2001	Hugh Anglin	EWG-143 US	4050
7590	11/10/2004		EXAMINER	
Joel R Meyer Digimarc Corporation 19801 SW 72nd Avenue Suite 100 Tualatin, OR 97062			THOMPSON, JAMES A	
			ART UNIT	PAPER NUMBER
			2624	
DATE MAILED: 11/10/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/826,616

Applicant(s)

ANGLIN, HUGH

Examiner

James A Thompson

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 1-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

The references listed on page 2, lines 26-28 and page 7, lines 7-9 of the specification are clearly considered relevant by Applicant and should be appropriately listed in a proper Information Disclosure Statement.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "101" in figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the

Art Unit: 2624

changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because the phrase "the images is divided into area" is incorrect grammar and also conflicts with the rest of the sentence since there are multiple areas. Correction is required. See MPEP § 608.01(b).

4. The disclosure is objected to because of the following informalities:

It is replete with spelling and grammatical errors. Some examples include:

On page 1, line 28, "is direct to providing an providing an improved lable" should be modified to read "is directed to providing an improved label".

On page 4, line 29, "week grid signal" should be modified to read "weak grid signal".

There are many other instances of spelling and grammatical errors in the specification. Applicant is advised to carefully review the specification to correct these errors.

Appropriate correction is required.

Claim Objections

5. Claims 2-7, 9-14 and 16 objected to because of the following informalities:

Claims 2-7, 9-14 and 16 all contain the phrase "recited in claim X wherein", where X is an associated claims number. The

Art Unit: 2624

phrases should be written "recited in claim X, wherein", where X is said associated claim number, in order to put the claim language into the proper form.

Appropriate correction is required.

6. Claims 1, 8, 15 and 17 are objected to because of the following informalities:

Claims 1, 8, 15 and 17 are not formatted properly. There should be the word "and" after the last semi-colon and before the last element of the method or system. For example, lines 7 and 8 of claim 1 should read:

"reading the digital watermark data from each area of said second image; and

determining the quality of the printing from the acquired digital watermark data."

A portion of claim 1, line 1 should be modified from "correctly comprising" to "correctly, comprising".

A portion of claim 8, line 1 should be modified from "image comprising" to "image, comprising".

A portion of claim 15, line 3 should be modified from "system comprising," to "system comprising:".

The current wording of claim 17 is confusing, but it is assumed by Examiner that the intended phrasing of claim 17, line 3 is "multiple areas of said image, said system comprising:" since after "multiple areas of said image," a plurality of different means are listed.

Appropriate correction is required.

7. Applicant is advised that should claim 10 be found allowable, claim 11 will be objected to under 37 CFR 1.75 as

Art Unit: 2624

being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim 10 recites "[t]he method recited in claim 8 wherein said watermark comprises a grid signal" and claim 11 recites "[t]he method recited in claim 8 wherein said watermark includes a grid signal." However, *comprises* and *includes* are both considered open language. Therefore, claim 10 and claim 11 recite identical subject matter, even though the wording is slightly different.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the "determining the quality of the printing from the acquired digital watermark data." Claim 8 recites "determining the quality of the printing from the acquired digital watermark data." Claim 15 recites "examining the magnitude of watermark information to determine the quality of said printing." However, said "quality" is subjective depending upon which criteria are considered important to the

Art Unit: 2624

user. Which aspects of the printed document are considered important to quality? Is the level of Moiré considered important to quality? Is the level of aliasing considered important to quality? Further, regarding claims 1 and 8, what measurements from the digital watermark data are used to determine quality? Regarding claim 15, "magnitude of watermark information" is vague. What is specifically meant by "magnitude of watermark information"? Is it the magnitude of the grayscale components of the watermark? Is it the number of pixels that are read in the watermark data? Considering all of these issues, it is clear that claims 1, 8 and 15, as currently written, fail to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Further, claim 8 recites the limitation "said first image" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Further, claim 15 recites the limitation "said printing" in lines 7-8 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claims 2-7 are dependent upon claim 1. Claims 9-14 are dependent upon claim 8. Claim 16 is dependent upon claim 15. Since claims 1, 8 and 15 are rejected under 35 U.S.C. 112, 2nd paragraph, claims 2-7, claim 9-14, and claim 16 are also rejected under 35 U.S.C. 112, 2nd paragraph, since said claims contain *inter alia* all of the limitations of their associated parent claim.

10. Claims 5 and 17-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point

Art Unit: 2624

out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites "if said digital watermark does not meet certain criteria." Claim 17 recites "the quality of said labels is unacceptable if the watermark data read from each area of said image does not meet specified criteria." What "criteria" are being referred to? The claim does not point this out and "criteria" can be many different things, such as the size of the watermark, the grayscale level of the watermark, the histogram distribution of the density values of the watermark, among many other possible criteria. Therefore, applicant fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 18 is also rejected under 35 U.S.C. 112, 2nd paragraph since claim 18 is dependent upon claim 17, and therefore comprises all of the limitations of claim 17.

11. Claims 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 specifically recites a system comprising (1) an image capture device, (2) a watermark reading program, and (3) examining the magnitude. (1) is a structural element of the system and is therefore properly recited. (2) is a program, but there is not structural element, such as a computer processor with an computer-readable medium for storing said program, in which said program is physically embodied. It is therefore indeterminate as to how (2) is structurally a part of the system. (3) is not a structural element, but is a method step

Art Unit: 2624

that is not embodied in any form in the system. For the system to patentably distinguish over the prior art, said system must be structurally different.

Further, due to the manner in which claim 15 is written, it is ambiguous as to whether (3) is a method step that is supposed to be performed by the program (2), or is a method step that is to be performed by some means that is not currently recited in claim 15.

Claim 16 is indeterminate since it is dependent on claim 15, and therefore comprises all of the limitations of claim 15.

For all of the above reasons, claims 15 and 16 are deemed indeterminate and fail to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-3 and 5-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox (US Patent 5,915,027) in view of Austin (US Patent 5,488,223).

Regarding claim 1: Cox discloses digitally watermarking an image (column 5, lines 10-12 of Cox), said watermark being redundantly applied in multiple areas of said image (figure 2

Art Unit: 2624

and column 5, lines 19-24 of Cox). A portion of a watermark is itself a watermark and is applied redundantly in multiple areas of the image (column 5, lines 19-24 of Cox).

Cox further discloses outputting said image (figure 2("watermarked data") and column 5, lines 32-34 of Cox); acquiring a second image of the watermarked image data (figure 4("watermarked data") and column 5, line 65 to column 6, line 4 of Cox); and reading the digital watermark from each area of said second image (column 6, lines 3-10 of Cox).

Cox does not disclose expressly printing said image on a carrier; that said second image is acquired from the image printed on said carrier; and determining the quality of the printing from the acquired digital watermark data.

Austin discloses printing an image on a carrier (column 7, lines 15-19 of Austin); acquiring a digital image (column 7, line 66 to column 8, line 1 of Austin); and determining the quality of the printing from digital data that has been acquired (column 8, lines 1-3 and lines 6-7 of Austin).

Cox and Austin are combinable because they are from the same field of endeavor, namely printing, reading, and processing digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print an image on a carrier, such as a label, and then scan the resultant image and inspect the image for quality, as taught by Austin, wherein said image is the watermarked digital image taught by Cox. The motivation for doing so would have been to ensure quality and therefore determine if the print parameters need to be adjusted (column 8, lines 3-6 of Austin). Therefore, it would have been obvious to combine Austin with Cox to obtain the invention as specified in claim 1.

Art Unit: 2624

Regarding claim 8: Cox discloses digitally modifying a first image to embed a digital watermark in said first image (column 5, lines 10-12 of Cox); outputting said first image (figure 2("watermarked data") and column 5, lines 32-34 of Cox); acquiring a second image of the watermarked image data (figure 4("watermarked data") and column 5, line 65 to column 6, line 4 of Cox); and reading said watermark from said second image to generate watermark data (column 6, lines 3-7 and lines 20-23 of Cox).

Cox does not disclose expressly printing said first image onto a carrier to create a printed image; that said second image is acquired from the image printed on said carrier; and determining the quality of said printing from said watermark data.

Austin discloses printing an image on a carrier to create a printed image (column 7, lines 15-19 of Austin); acquiring a digital image (column 7, line 66 to column 8, line 1 of Austin); and determining the quality of the printing from digital data that has been acquired (column 8, lines 1-3 and lines 6-7 of Austin).

Cox and Austin are combinable because they are from the same field of endeavor, namely printing, reading, and processing digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print an image on a carrier, such as a label, and then scan the resultant image and inspect the image for quality, as taught by Austin, wherein said image is the watermarked digital image taught by Cox. The motivation for doing so would have been to ensure quality and therefore determine if the print parameters need to be adjusted (column 8, lines 3-6 of Austin). Therefore,

Art Unit: 2624

it would have been obvious to combine Austin with Cox to obtain the invention as specified in claim 8.

Regarding claim 15: Cox discloses a system (figure 4 of Cox) comprising an image capture device (figure 4("watermarked data") of Cox) for acquiring a second image of an image (column 5, line 65 to column 6, line 4 of Cox). Since the data is read into said system, some form of image capture device is inherent.

Cox further discloses a watermark reading program (figure 4(42) of Cox) for reading watermark information from each of a plurality of areas of said second image (column 6, lines 3-10 of Cox); and examining the magnitude of watermark information (column 6, lines 15-20 of Cox). Performing correlation and decision operations on the watermark data in order to identify the watermarked character (column 6, lines 15-10 of Cox) requires in part an examination of the magnitude. Without sufficient magnitude of the watermark data, it is not possible to determine the symbol that has been watermarked.

Cox does not disclose expressly that said second image is acquired from a printed image; and that said watermark information is examined to determine the quality of said printing.

Austin discloses acquiring a digital image from a printed image (column 7, line 66 to column 8, line 1 of Austin); and determining the quality of the printing from digital data that has been acquired (column 8, lines 1-3 and lines 6-7 of Austin).

Cox and Austin are combinable because they are from the same field of endeavor, namely printing, reading, and processing digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to scan a printed image and inspect the image for quality, as taught by

Art Unit: 2624

Austin, wherein said image is the watermarked digital image taught by Cox. The motivation for doing so would have been to ensure quality and therefore determine if the print parameters need to be adjusted (column 8, lines 3-6 of Austin). Therefore, it would have been obvious to combine Austin with Cox to obtain the invention as specified in claim 15.

Regarding claim 17: Cox discloses a system (figure 4 of Cox) comprising means (figure 4("watermarked data") of Cox) for acquiring an image (column 5, line 65 to column 6, line 4 of Cox). Since the data is read into said system, some form of image capture device is inherent.

Cox further discloses means (figure 4(42) of Cox) for reading watermark data from each area of said image (column 6, lines 3-10 of Cox); and means (figure 4(44(a,b,...)) of Cox) for examining said watermark data in each area of said image (column 6, lines 15-20 of Cox).

Cox does not disclose expressly that said acquired image is an image of printed labels after said labels have been printed; and means for indicating that the quality of said labels is unacceptable if the watermark data read from each area of said image does not meet specified criteria.

Austin discloses acquiring an image of printed labels (figure 3b and column 7, lines 56-59 of Austin) after said labels have been printed (column 7, line 66 to column 8, line 1 of Austin); and means (figure 2a(102) of Austin) for indicating that the quality of said labels is unacceptable if the image data read from said labels does not meet specified criteria (column 8, lines 1-3 and lines 6-7 of Austin).

Cox and Austin are combinable because they are from the same field of endeavor, namely printing, reading, and processing

Art Unit: 2624

digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to scan printed labels and inspect said labels for quality, as taught by Austin, wherein said labels have a watermarked digital image printed upon them, as taught by Cox. Since each area of watermark data is read (column 6, lines 15-20 of Cox) and used to form a larger watermark image (column 6, lines 20-22 of Cox), then each area of watermark data would be inspected for quality. The motivation for doing so would have been to ensure quality and therefore determine if the print parameters need to be adjusted (column 8, lines 3-6 of Austin). Therefore, it would have been obvious to combine Austin with Cox to obtain the invention as specified in claim 17.

Regarding claims 2, 10, 11, 16 and 18: Cox discloses that said digital watermark includes a grid signal (figure 5 and column 8, lines 36-40 of Cox). The watermarks are arranged in 8x8 blocks on a grid (figure 5 and column 8, lines 36-37 of Cox), and embedded in the image using their computed two-dimensional DCT coefficients (column 8, lines 37-40 of Cox). The set of DCT coefficients computed for the 8x8 block grid watermark image separations (column 8, lines 36-40 of Cox) is the grid signal of the digital watermark.

Regarding claims 3, 9 and 13: Cox does not disclose expressly that said carrier is a label.

Austin discloses printing on a carrier, wherein said carrier is a label (figure 3b and column 7, lines 56-59 of Austin).

Cox and Austin are combinable because they are from the same field of endeavor, namely printing, reading, and processing digital image data. At the time of the invention, it would have

Art Unit: 2624

been obvious to a person of ordinary skill in the art to print said watermarked image on a label. The motivation for doing so would have been labels can be used as another form of data storage and entry (column 4, lines 3-5 of Austin). Therefore, it would have been obvious to combine Austin with Cox to obtain the invention as specified in claims 3, 9 and 13.

Regarding claim 5: Cox does not disclose expressly that said label is rejected if said digital watermark data does not meet certain criteria.

Austin discloses rejecting said labels if the image data read from said labels does not meet certain criteria (column 8, lines 1-3 and lines 6-7 of Austin).

Cox and Austin are combinable because they are from the same field of endeavor, namely printing, reading, and processing digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art inspect said labels for quality and reject said labels if certain criteria are not met, as taught by Austin, wherein said labels have a watermarked digital image printed upon them, as taught by Cox. The motivation for doing so would have been to ensure quality and therefore determine if the print parameters need to be adjusted (column 8, lines 3-6 of Austin). Therefore, it would have been obvious to combine Austin with Cox to obtain the invention as specified in claim 5.

Regarding claim 6: Cox discloses examining the watermark data in each area of the watermarked image (column 6, lines 15-20 of Cox).

Cox does not disclose expressly that the quality is deemed unacceptable if digital watermark data cannot be read from each area of said second image.

Art Unit: 2624

Austin discloses deeming the quality unacceptable if the image data read from said labels does not meet specified criteria (column 8, lines 1-3 and lines 6-7 of Austin). If the labels cannot be read, then they clearly will not be able to meet any specified criteria.

Cox and Austin are combinable because they are from the same field of endeavor, namely printing, reading, and processing digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art inspect said labels for quality, as taught by Austin, wherein said labels have a watermarked digital image printed upon them, as taught by Cox. Since each area of watermark data is read (column 6, lines 15-20 of Cox) and used to form a larger watermark image (column 6, lines 20-22 of Cox), then each area of watermark data would be inspected for quality. Therefore, each area must be able to be read in order for the quality to be deemed acceptable. Otherwise, the smaller watermark images cannot be combined into the larger watermark image. The motivation for doing so would have been to ensure quality and therefore determine if the print parameters need to be adjusted (column 8, lines 3-6 of Austin). Therefore, it would have been obvious to combine Austin with Cox to obtain the invention as specified in claim 6.

Regarding claim 7: The arguments regarding claim 6 are incorporated herein. Cox discloses that the watermarks are arranged in 8x8 blocks on a grid (figure 5 and column 8, lines 36-37 of Cox), and embedded in the image using their computed two-dimensional DCT coefficients (column 8, lines 37-40 of Cox). The set of DCT coefficients computed for the 8x8 block grid watermark image separations (column 8, lines 36-40 of Cox) is

Art Unit: 2624

the grid signal of the digital watermark. Said DCT coefficients must be able to be read in order for the watermark to be read since said DCT coefficients are the representation of said watermark signal. Therefore, if the grid signal cannot be read from each area of said image, then the quality must be deemed unacceptable.

Regarding claim 12: Cox discloses that said watermark is redundantly embedded in multiple areas of said image (figure 2 and column 5, lines 19-24 of Cox). A portion of a watermark is itself a watermark and is applied redundantly in multiple areas of the image (column 5, lines 19-24 of Cox).

Regarding claim 14: The arguments regarding claim 6 are incorporated herein. If said watermark cannot be read from at least one area of said label, then clearly said watermark cannot be read from each area of said label. Therefore, the quality will be deemed unacceptable, and therefore rejected, if said watermark cannot be read from at least one area of said label.

14. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Cox (US Patent 5,915,027) in view of Austin (US Patent 5,488,223) and Jain (US Patent 5,249,053).

Regarding claim 4: Cox in view of Austin does not disclose expressly that said second image is acquired using a digital camera.

Jain discloses acquiring an image with a digital camera (column 5, lines 40-44 of Jain).

Cox in view of Austin is combinable with Jain because they are from the same field of endeavor, namely digital image data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a

Art Unit: 2624

digital camera to acquire said second image. The motivation for doing so would have been that a digital camera is filmless and therefore directly stores the data digitally (column 1, lines 15-21 of Jain), which is useful for the watermarking device taught by Cox since the watermarked data is input into said watermarking device digitally (figure 4("watermarked data") of Cox). Therefore, it would have been obvious to combine Jain with Cox in view of Austin to obtain the invention as specified in claim 4.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A Thompson whose telephone number is 703-305-6329. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 703-308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/826,616

Page 18

Art Unit: 2624

James A. Thompson
Examiner
Art Unit 2624

JAT
29 October 2004



THOMAS D
~~TOMMY~~ LEE
PRIMARY EXAMINER